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Reply to non-final Office Action dated January 11, 2005

Listing of the Claims:

1. (Currently Amended) A driving circuit for an active matrix electroluminescence device

(AMELD) having data and gate drivers that respectively transmit a data signal and a scan signal

to each of a plurality of pixel regions, comprising:

a latch for latching a control signal; and

a plurality of digital to analog converters (DAC) for outputting a reference current of a

certain level as a data signal according to R/G/B channels and the control signal, wherein the

DACs include:

a reference current output unit for outputting a reference current, wherein the

reference current output unit temporarily combines a plurality of reference current sources of a

plurality of switching devices to output the reference current; and

a sink current controller for controlling a level of a sink current according to each

R/G/B channel by receiving the reference current from the reference current output unit.

Claim 2 (Canceled).

3. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein an output terminal of the sink current controller is

connected to a data line.

Claim 4 (Canceled).

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5. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 1, wherein the control signal is a digital input signal corresponding to a video analog

signal.

6. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[4]] 1, wherein the reference current sources are temporarily set to

any one of binary weight and gamma correction methods.

7. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[4]] 1, wherein the switching device is a thin film transistor.

8. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, the sink current controller is of a current mirror type

including:

a first voltage terminal;

a second voltage terminal;

a first transistor connected between an output terminal of the reference current output

unit and the first voltage terminal; and

a second transistor connected between the second voltage terminal and a data line, the

first and second transistors being controlled by the output terminal of the reference current

output unit.

9. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 8, wherein the first voltage terminal is set at a certain value, and the second voltage

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terminal controls a level of a sink current according to each R/G/B channel by an externally

applied voltage according to each R/G/B channel.

10. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 8, further comprising a current breaking switch between the output terminal of the

reference current output unit and the first transistor.

11. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein the sink current controller includes a first voltage

terminal;

a fixed resistance;

a first transistor connected to the fixed resistance in series between an output terminal of

the reference current output unit and a first voltage terminal; and

a second transistor connected between the first voltage terminal and a data line, the first

and second transistors being controlled by the output terminal of the reference current output

unit.

12. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 11, wherein the fixed resistance is connected between the first voltage terminal and the

first transistor, the fixed resistance selected according to a certain reference current for each

R/G/B channel.

13. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 11, wherein the first voltage terminal is a constant value.

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14. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 11, further comprising a current breaking switch between the output terminal of the

reference current output unit and the first transistor.

15. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein the sink current controller including includes a first

voltage terminal;

a fixed resistance;

a first transistor connected between an output terminal of the reference current output

unit and the first voltage terminal;

and a second transistor connected to the fixed resistance in series between the first

voltage terminal and a data line, the first and second transistors being controlled by the output

terminal of the reference current output unit.

16. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 15, wherein the first voltage terminal is a constant value.

17. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 15, wherein the fixed resistance is connected between the first voltage terminal and the

second transistor, the fixed resistance selected according to a certain reference current for each

R/G/B channel.

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18. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 15, further comprising a current breaking switch between the output terminal of the

reference current output unit and the first transistor.

19. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein the sink current controller including includes a first

voltage terminal;

first and second transistors;

a third transistor connected with the first transistor in series between an output terminal

of the reference current output unit and the first voltage terminal; and

a fourth transistor connected with the second transistor in series between the first voltage

terminal and a data line, the third and fourth transistors being controlled by the output terminal

of the reference current output unit.

20. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 19, wherein gates of the first and second transistors are connected to a bias voltage.

21. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 19, wherein the first voltage terminal is an externally applied voltage to control a sink

current according to each R/G/B channel.

22. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 19, wherein the bias voltage is constantly applied from an external source.

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23. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 19, further comprising a current breaking switch between the output terminal of the

reference current output unit and the first transistor.

24. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein the sink current controller includes a first voltage

terminal;

a first transistor;

a second transistor connected between the first voltage terminal and the output terminal

of the reference current output unit; and

a third transistor connected with the first transistor in series between the first voltage

terminal and a data line, the second and third transistors being controlled by output value from a

drain of the first transistor.

25. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 24, wherein a gate of the first transistor is connected to the output terminal of the

reference current output unit.

26. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 24, wherein the first voltage terminal applies a certain voltage according to each R/G/B

channel.

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27. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 22, further comprising a current breaking switch between the output terminal of the

reference current output unit and the first transistor.

28. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein the sink current controller includes a first voltage

terminal;

a variable resistance and a first transistor connected in series between an output terminal

of the reference current output unit and the first voltage terminal;

a third transistor connected in series between the data line and the first voltage terminal;

a gate of the third transistor contacted between the variable resistance and the first

transistor; and

a second transistor connected in series between the third transistor and the first voltage

terminal, gates of the first and second transistors contacting a drain of the third transistor.

29. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 28, wherein the first voltage terminal applies a certain voltage according to each R/G/B

channel.

30. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 28, wherein a fixed resistance having a certain resistance value according to R/G/B

channels is connected between the first transistor and the first voltage terminal.

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31. (Original) The driving circuit for an active matrix electroluminescence device as claimed in claim 28, wherein a fixed resistance having a certain resistance value according to R/G/B

channels is connected between the second transistor and the first voltage terminal.

32. (Currently Amended) The driving circuit for an active matrix electroluminescence

device as claimed in claim [[2]] 1, wherein the sink current controller includes a first voltage

terminal;

a second voltage terminal;

a variable resistance, a first transistor, and a third transistor connected in series between

the output terminal of the reference current output unit and the first voltage terminal;

a second transistor connected in series between the data line and the second voltage

terminal;

gates of the first and second transistors connected to a bias voltage; and

a fourth transistor connected in series between the second transistor and the second

voltage terminal;

gates of the third and fourth transistor connected between the variable resistance and the

first transistor.

33. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 32, wherein the bias voltage is constantly applied from an external source.

34. (Original) The driving circuit for an active matrix electroluminescence device as claimed

in claim 32, wherein the first voltage terminal has a certain value and the second voltage

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terminal;

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terminal applies a certain voltage from an external source according to R/G/B channels, thereby controlling a level of sink current according to R/G/B channels.

35. (Currently Amended) The driving circuit for an active matrix electroluminescence device as claimed in claim [[2]] 1, wherein the sink current controller includes a first voltage

a variable resistance, a first transistor, and a third transistor connected in series between an output terminal of the reference current output unit and the first voltage terminal;

a second transistor connected in series between a data line and the first voltage terminal; gates of the first and second transistors connected to a bias voltage; and

a fourth transistor connected in series between the second transistor and the first voltage terminal;

gates of the third and fourth transistors connected between the variable resistance and the first transistor.

- 36. (Original) The driving circuit for an active matrix electroluminescence device as claimed in claim 35, wherein a fixed resistance having a certain resistance value according to R/G/B channels is connected between the third transistor and the first voltage terminal.
- 37. (Original) The driving circuit for an active matrix electroluminescence device as claimed in claim 35, wherein a fixed transistor having a certain resistance value according to R/G/B channels is connected between the fourth transistor and the first voltage terminal.

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38. (Original) The driving circuit for an active matrix electroluminescence device as claimed in claim 35, wherein the first voltage terminal applies a certain voltage from a external source to control a sink current according to R/G/B channels.